

QUADRATIC FUNCTION

$$y = x^2$$

$$y = a \underline{x^2} + b x + c$$

x^2 TERM IS A MUST
2 - IS THE HIGHEST
EXPONENT

II FOIL METHOD

F FIRST TERMS

O OUTSIDE TERMS

I INSIDE TERMS

L LAST TERMS

$$(2x+3)(x-5)$$

$$(2x+3)(x-5)$$

$$x-5 = x + -5$$

$$F \quad 2x \cdot x = 2x^2$$

$$\begin{array}{r} -10x \\ \text{---} \end{array}$$

$$O \quad 2x(-5) = \underline{-10x}$$

$$I \quad 3 \cdot x = \underline{3x}$$

$$\begin{array}{r} +3x \\ \text{---} \\ 000 \end{array}$$

$$L \quad 3(-5) = -15$$

$$2x^2 - \underline{10x} + \underline{3x} - 15 = \underline{2x^2 - 7x - 15}$$

$$(\underline{4x} + 3)(\underline{x} - 6)$$

$$x - 6 = x + -6$$

$$F: 4x \cdot x = 4x^2$$

$$\textcircled{+} \textcircled{+} \rightarrow \textcircled{+}$$

$$O: 4x(-6) = -24x$$

$$\textcircled{-} \textcircled{+} \rightarrow \textcircled{-}$$

$$I: 3 \cdot x = 3x$$

$$\textcircled{+} \textcircled{-} \rightarrow \textcircled{-}$$

$$L: 3(-6) = -18$$

$$\textcircled{-} \textcircled{-} \rightarrow \textcircled{+}$$

$$\underline{4x^2 - 24x} + \underline{3x - 18} = 4x^2 - 21x - 18$$

17 MULTIPLY BINOMIALS AND
THEN CHANGE ALL SIGNS

$$X \cdot X = X^2$$

$$f(x) = y$$

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$$y = (\underline{x} - \underline{3})(\underline{x} + \underline{8})$$

FIRST TERMS

$$x \cdot x = x^2$$

OUTSIDE TERMS

$$x \cdot 8 = 8x$$

INSIDE TERMS

$$-3 \cdot x = -3x$$

LAST TERMS

$$-3 \cdot 8 = -24$$

$$\underline{x^2 + 8x} - \underline{3x - 24} = \underline{x^2 + 5x - 24}$$

$$y_1 = (2x+3)(x-5)$$

$$y_3 = -(2x+3)(x-5)$$

$$y_2 = 2x^2 - 7x - 15$$

$$y_4 = -(2x^2 - 7x - 15)$$

zoom out [3]

$$x^2$$

$$\boxed{x} \boxed{\wedge} \boxed{2}$$

$$x^2$$

$$\boxed{x} \boxed{x^2}$$

HOME
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 EVEN